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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-------------------------|-----------------------------|-------------------|
| 09/413,792 | 10/07/1999 | PATRICK ROSS TRISCHITTA | 04787.81749 | 2431 |
| 7590 | 04/11/2003 | | | |
| DANIEL N. DAISAK TYCOM (US) INC. 250 INDUSTRIAL WAY WEST ROOM 2B106 EATONTOWN, NJ 07724 | | | EXAMINER SINGH, DALZID E | |
| | | | ART UNIT 2633 | PAPER NUMBER 6 |
| DATE MAILED: 04/11/2003 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|--------------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/413,792 | TRISCHITTA, PATRICK ROSS | |
| | Examiner | Art Unit | |
| | Dalzid Singh | 2633 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 October 1999.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group 1 in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 5, 6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohta et al (US Patent No. 5,644,466).

Regarding claim 1, Ohta et al disclose submarine cable system, shown in Fig. 5, comprising:

first (C1) and second cables (C2), wherein each of said first and second cables further comprises one or more data signal carrying lines and an electrical power conductor, wherein said first cable carries data signals between communication devices of a first landmass (landmass where first cable originate) and a second landmass (landmass where second cable originate), and said second cable carries data signals

between communication devices of the first landmass and a third landmass (branching unit (BU)) (see col. 1, lines 5-9, Ohta et al disclose that the system is used to carry power and data signal between different landing stations (i.e., landmass)); and

an electrical power connector (rc 11 and rc12) connecting said electrical power conductors of said first and second cables so that electrical current can flow between said power conductors of said first and second cables.

Regarding claim 4, in Fig. 1A, Ohta et al show cables include one or more optical repeaters (REP).

Regarding claim 5, as shown in Fig. 5, an end of said first cable (C1), and an end of said second cable (C2), enter onto a first landmass at a common landing point (N).

Regarding claim 6, ends of said first and second cables are routed to a cable station (i.e., branching unit (BU)), and said electrical power connector is located in said cable station (switching circuit (i.e., power connector) are located in the branching unit (BU)).

Regarding claim 9, Ohta et al show that the signal carrying lines of said first cable are communicatively isolated from said signal carrying lines of said second cable (since the cables are connected by electrical switches, therefore the cables can be communicatively isolated when the switch is open).

Regarding claim 10, Ohta et al show that signal carrying lines of said first cable carry different signals from signals carried on said signal carrying lines of said second cable (since the signal carrying lines (C1 and C2) carry signals from different locations (C and B), therefore the signals carried on the two different cables could be different).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 3, 7, 8 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al (US Patent No. 5,644,466) in view of prior art figures (hereinafter "reference 2") submitted by the applicant.

Regarding claim 11, Ohta et al disclose submarine cable system , shown in Fig. 5, comprising:

a first cable (C1) station located on a first landmass (land station C);
a second cable (C2) station located on a second landmass (land station B);
a plurality of cable segments, each connecting communication networks of two landmasses, wherein each of said plurality of cable segments includes an electrical power conductor and one or more data signal carrying lines (Fig. 5, shows branching unit (BU) which connects plurality of cable segments).

Ohta et al differ from this claim in that Ohta et al do not specifically disclose having a first and second piece of power feed equipment and wherein said electrical power conductors of said plurality of cable segments are electrically connected in series between a positive terminal of said first piece of power equipment and a negative terminal of said second piece of power feed equipment. However, in Fig. 4 of reference 2, plurality of power feed equipments are shown, wherein the plurality of cable

segments are electrically connected in series between a positive terminal (403) of said first piece of power equipment and a negative terminal (404) of said second piece of power feed equipment. It is well known that data signal degrades after traveling long distances, therefore it would have been obvious to provide a repeater system along the transmission line to regenerate the data signal. In submarine communication system, where the repeater system is submerged under water, it is difficult to provide power to the repeater system since there is no source of power underwater. Therefore it would have been obvious to provide power (i.e., power feed) to the repeater system through the transmission lines. The motivation of providing power through the transmission line is to be able place the repeater system anywhere underwater and still have power to function properly.

Regarding claim 12, as discussed above, reference 2 shows plurality of cable segments includes a device powered by an electrical current carried on said electrical power conductor of said one of said plurality of cable segments (since the cable is connected at the positive and negative terminal, therefore current is able to flow).

Regarding claims 13 and 14, as discussed above, reference 2 further shows said data signal carrying lines within said one of said plurality of cable segments is an optical fiber (see Fig. 2).

Regarding claim 15, Ohta et al disclose that data signal carrying lines of said plurality of cable segments are not connected in series between said first and second cable stations (in Fig. 5, Ohta et al show switching circuits in the branching units (BU),

where different cables can be connected (switch closed) in series or disconnected (switch open).

Regarding claim 2, in Fig. 5, Ohta et al show plurality of switching circuits connecting plurality of cables from different land stations and differ from this claim in that Ohta et al do not specifically disclose a first piece of power feed equipment having positive and negative terminals. However, reference 2, shows power feed equipments (403 and 404) having positive and negative terminals. Since power feed equipments have positive and negative terminals, therefore it would have been obvious to connect the positive from one terminal to the negative of the other terminal in order for the current to flow in a specified direction.

Regarding claim 3, as discussed above, in Fig. 3 reference 2 further shows wherein said negative terminal of said first piece of power feed equipment and said positive terminal of said second piece of power feed equipment are electrically connected to a ground potential.

Regarding claim 7, Ohta et al differ from this claim in that Ohta et al do not specifically disclose plurality of data signal carrying lines, communicatively coupled to said one or more data signal carrying lines of said first cable, and further communicatively coupled to a communication device of a first communication network located on the first landmass. However, reference 2 shows cross-section of the transmission lines, which comprises of plurality of data carrying lines (202). Since transmission bandwidth increases over time, therefore it would have been obvious to

provide plurality of data lines in order to transfer large amount of data signal to various locations.

Regarding claim 8, the combination of Ohta et al and reference 2 differs from this claim in that the combination does not specifically disclose converter for converting between optical and electrical signals. However, since data signal is carried by optical signal, therefore it would have been obvious to provide a converter that converts the optical signal into electrical signal in order to received and processed the transmitted information signal.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kelly et al (US Patent No. 4,641,372) is cited to show power feeding submarine telecommunications systems.

Hanyuda et al (US Patent No. 4,879,762) is cited to show optical repeater and regulated current feeding system for the same.

Inoue (US Patent No. 5,214,312) is cited to show power feed line switching circuit for submarine branching device and method of feeding power to submarine cable communication system.

Kawano (US Patent No. 5,526,157) is cited to show optical submarine cable system.

Crameri et al (US Patent No. 6,166,836) is cited to show power switching of optical fibre cable branching units.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is 703-306-5619. The examiner can normally be reached on Mon-Fri 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

DS
April 3, 2003



LESLIE PASCAL
PRIMARY EXAMINER